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1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/667,947A

DATE: 06/10/2003 P.6

TIME: 11:18:45

Input Set : A:\07039-298001.txt

Output Set: N:\CRF4\06102003\I667947A.raw

```

4 <110> APPLICANT: Russell, Stephen James
5      Cattaneo, Roberto
6      Peng, Kah-Whye
7      Schneider, Urs
8      Murphy, Anthea L.
10 <120> TITLE OF INVENTION: Therapeutic methods and compositions
11      using viruses of the recombinant paramyxoviridae family
14 <130> FILE REFERENCE: 07039-298001
16 <140> CURRENT APPLICATION NUMBER: US 09/667,947A
17 <141> CURRENT FILING DATE: 2000-09-22
19 <150> PRIOR APPLICATION NUMBER: US 60/155,873
20 <151> PRIOR FILING DATE: 1999-09-24
22 <160> NUMBER OF SEQ ID NOS: 49
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 4
28 <212> TYPE: PRT
29 <213> ORGANISM: Artificial Sequence
W--> 30 <220> FEATURE:
31 <223> OTHER INFORMATION: Factor Xa cleavage site
W--> 32 <400> SEQUENCE: 1
33   Ile Glu Gly Arg
34   1
36 <210> SEQ ID NO: 2
37 <211> LENGTH: 4
38 <212> TYPE: PRT
39 <213> ORGANISM: Artificial Sequence
W--> 40 <220> FEATURE:
41 <223> OTHER INFORMATION: Furin cleavage site
W--> 42 <220> FEATURE:
43 <221> NAME/KEY: VARIANT
44 <222> LOCATION: 2
45 <223> OTHER INFORMATION: Xaa = Any 20 amino acids
W--> 46 <400> SEQUENCE: 2
W--> 47   Arg Xaa Lys Arg
48   1
50 <210> SEQ ID NO: 3
51 <211> LENGTH: 6
52 <212> TYPE: PRT
53 <213> ORGANISM: Artificial Sequence
W--> 54 <220> FEATURE:
55 <223> OTHER INFORMATION: MMP cleavage site
58 <400> SEQUENCE: 3

```

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```

59 Pro Leu Gly Leu Trp Ala
60 1 5
62 <210> SEQ ID NO: 4
63 <211> LENGTH: 6
64 <212> TYPE: PRT
65 <213> ORGANISM: Artificial Sequence
W--> 66 <220> FEATURE:
67 <223> OTHER INFORMATION: Caspase-1 cleavage site
W--> 68 <400> SEQUENCE: 4
69 Tyr Glu Val Asp Gly Trp
70 1 5
72 <210> SEQ ID NO: 5
73 <211> LENGTH: 7
74 <212> TYPE: PRT
75 <213> ORGANISM: Artificial Sequence
W--> 76 <220> FEATURE:
77 <223> OTHER INFORMATION: Caspase-2 cleavage site
W--> 78 <400> SEQUENCE: 5
79 Val Asp Val Ala Asp Gly Trp
80 1 5
82 <210> SEQ ID NO: 6
83 <211> LENGTH: 7
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
W--> 86 <220> FEATURE:
87 <223> OTHER INFORMATION: Caspase-3 cleavage site
W--> 88 <400> SEQUENCE: 6
89 Val Asp Gln Met Asp Gly Trp
90 1 5
92 <210> SEQ ID NO: 7
93 <211> LENGTH: 6
94 <212> TYPE: PRT
95 <213> ORGANISM: Artificial Sequence
W--> 96 <220> FEATURE:
97 <223> OTHER INFORMATION: Caspase-4 cleavage site
W--> 98 <400> SEQUENCE: 7
99 Leu Glu Val Asp Gly Trp
100 1 5
102 <210> SEQ ID NO: 8
103 <211> LENGTH: 6
104 <212> TYPE: PRT
105 <213> ORGANISM: Artificial Sequence
W--> 106 <220> FEATURE:
107 <223> OTHER INFORMATION: Caspase-6 cleavage site
W--> 108 <400> SEQUENCE: 8
109 Val Gln Val Asp Gly Trp
110 1 5
112 <210> SEQ ID NO: 9
113 <211> LENGTH: 7

```

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Input Set : A:\07039-298001.txt

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```

114 <212> TYPE: PRT
115 <213> ORGANISM: Artificial Sequence
W--> 116 <220> FEATURE:
117 <223> OTHER INFORMATION: Caspase-7 cleavage site
W--> 118 <400> SEQUENCE: 9
119 Val Asp Gln Val Asp Gly Trp
120 1 5
122 <210> SEQ ID NO: 10
123 <211> LENGTH: 4
124 <212> TYPE: PRT
125 <213> ORGANISM: Artificial Sequence
W--> 126 <220> FEATURE:
127 <223> OTHER INFORMATION: Proprotein convertase cleavage site
W--> 128 <400> SEQUENCE: 10
129 Arg Gly Leu Thr
130 1
132 <210> SEQ ID NO: 11
133 <211> LENGTH: 17
134 <212> TYPE: PRT
135 <213> ORGANISM: Artificial Sequence
W--> 136 <220> FEATURE:
137 <223> OTHER INFORMATION: FMDV protease 2A cleavage site
W--> 138 <400> SEQUENCE: 11
139 Asn Phe Asp Leu Leu Lys Leu Ala Gly Asp Val Glu Ser Asn Pro Gly
140 1 5 10 15
141 Pro
143 <210> SEQ ID NO: 12
144 <211> LENGTH: 34
145 <212> TYPE: PRT
146 <213> ORGANISM: Paramyxoviridae
W--> 147 <220> FEATURE:
148 <223> OTHER INFORMATION: H protein cytoplasmic tail
W--> 149 <400> SEQUENCE: 12
150 Met Ser Pro Gln Arg Asp Arg Ile Asn Ala Phe Tyr Lys Asp Asn Pro
151 1 5 10 15
152 His Pro Lys Gly Ser Arg Ile Val Ile Asn Arg Glu His Leu Met Ile
153 20 25 30
154 Asp Arg
157 <210> SEQ ID NO: 13
158 <211> LENGTH: 33
159 <212> TYPE: PRT
160 <213> ORGANISM: Paramyxoviridae
W--> 161 <220> FEATURE:
162 <223> OTHER INFORMATION: F protein cytoplasmic tail
W--> 163 <400> SEQUENCE: 13
164 Arg Gly Arg Cys Asn Lys Lys Gly Glu Gln Val Gly Met Ser Arg Pro
165 1 5 10 15
166 Gly Leu Lys Pro Asp Leu Thr Gly Thr Ser Lys Ser Tyr Val Arg Ser
167 20 25 30

```

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```

168 Leu
172 <210> SEQ ID NO: 14
173 <211> LENGTH: 5
174 <212> TYPE: PRT
175 <213> ORGANISM: Artificial Sequence
W--> 176 <220> FEATURE:
177 <223> OTHER INFORMATION: Furin cleavage site
W--> 178 <400> SEQUENCE: 14
179 Arg Arg His Lys Arg
180 1 5
182 <210> SEQ ID NO: 15
183 <211> LENGTH: 4
184 <212> TYPE: PRT
185 <213> ORGANISM: Artificial Sequence
W--> 186 <220> FEATURE:
187 <223> OTHER INFORMATION: Furin cleavage site
W--> 188 <400> SEQUENCE: 15
189 Arg His Lys Arg
190 1
192 <210> SEQ ID NO: 16
193 <211> LENGTH: 47
194 <212> TYPE: DNA
195 <213> ORGANISM: Artificial Sequence
W--> 196 <220> FEATURE:
197 <223> OTHER INFORMATION: Primer
W--> 198 <400> SEQUENCE: 16
199 ttttcctttt gcggccgctt tcatcaacgc ttctgcaggg acccctc 47
201 <210> SEQ ID NO: 17
202 <211> LENGTH: 56
203 <212> TYPE: DNA
204 <213> ORGANISM: Artificial Sequence
W--> 205 <220> FEATURE:
206 <223> OTHER INFORMATION: Primer
W--> 207 <400> SEQUENCE: 17
208 gtccatgcgg ccagccggc ccgattaaag agagaggcag aggacctgca ggtggg 56
210 <210> SEQ ID NO: 18
211 <211> LENGTH: 18
212 <212> TYPE: PRT
213 <213> ORGANISM: Artificial Sequence
W--> 214 <220> FEATURE:
215 <223> OTHER INFORMATION: Amino acid sequence coded for by primer
W--> 216 <400> SEQUENCE: 18
217 Val His Ala Ala Gln Pro Ala Arg Leu Lys Arg Glu Ala Glu Asp Leu
218 1 5 10 15
219 Gln Val
222 <210> SEQ ID NO: 19
223 <211> LENGTH: 50
224 <212> TYPE: DNA
225 <213> ORGANISM: Artificial Sequence

```

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**W--> 226 <220> FEATURE:**  
 227 <223> OTHER INFORMATION: Primer  
 229 <400> SEQUENCE: 19  
 230 ttttcctttt gcggcgcgtt tcatcatcaa cgcttctgca gggacccctc 50  
 232 <210> SEQ ID NO: 20  
 233 <211> LENGTH: 59  
 234 <212> TYPE: DNA  
 235 <213> ORGANISM: Artificial Sequence  
**W--> 236 <220> FEATURE:**  
 237 <223> OTHER INFORMATION: Primer  
**W--> 238 <400> SEQUENCE: 20**  
 239 gtccatgcgg ccagccggc cgggtggaggc gggtcagagg cagaggacct gcaggtggg 59  
 241 <210> SEQ ID NO: 21  
 242 <211> LENGTH: 19  
 243 <212> TYPE: PRT  
 244 <213> ORGANISM: Artificial Sequence  
**W--> 245 <220> FEATURE:**  
 246 <223> OTHER INFORMATION: Amino acid sequence coded for by primer  
**W--> 247 <400> SEQUENCE: 21**  
 248 Val His Ala Ala Gln Pro Ala Gly Gly Gly Gly Ser Glu Ala Glu Asp  
 249 1 5 10 15  
 250 Leu Gln Val  
 253 <210> SEQ ID NO: 22  
 254 <211> LENGTH: 16  
 255 <212> TYPE: PRT  
 256 <213> ORGANISM: Paramyxoviridae  
**W--> 257 <220> FEATURE:**  
 258 <223> OTHER INFORMATION: F protein cytoplasmic tail  
**W--> 259 <400> SEQUENCE: 22**  
 260 Arg Gly Arg Cys Asn Lys Lys Gly Glu Gln Gly Met Ser Arg Pro Gly  
 261 1 5 10 15  
 263 <210> SEQ ID NO: 23  
 264 <211> LENGTH: 9  
 265 <212> TYPE: PRT  
 266 <213> ORGANISM: Paramyxoviridae  
**W--> 267 <220> FEATURE:**  
 268 <223> OTHER INFORMATION: Cytoplasmic tail of Fc(24 mutant)  
**W--> 269 <400> SEQUENCE: 23**  
 270 Arg Gly Arg Cys Asn Lys Lys Gly Glu  
 271 1 5  
 273 <210> SEQ ID NO: 24  
 274 <211> LENGTH: 26  
 275 <212> TYPE: DNA  
 276 <213> ORGANISM: Artificial Sequence  
**W--> 277 <220> FEATURE:**  
 278 <223> OTHER INFORMATION: Primer  
**W--> 279 <400> SEQUENCE: 24**  
 280 aaaactgcag actcaaaggt caatgc 26  
 282 <210> SEQ ID NO: 25

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/667,947A

DATE: 06/10/2003  
TIME: 11:18:46

Input Set : A:\07039-298001.txt  
Output Set: N:\CRF4\06102003\I667947A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 2

Seq#:35; Xaa Pos. 5,6,7

Seq#:36; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,15,16,17,20

## VERIFICATION SUMMARY

DATE: 06/10/2003

PATENT APPLICATION: US/09/667,947A

TIME: 11:18:46

Input Set : A:\07039-298001.txt

Output Set: N:\CRF4\06102003\I667947A.raw

L:30 M:283 W: Missing Blank Line separator, <220> field identifier  
L:32 M:283 W: Missing Blank Line separator, <400> field identifier  
L:40 M:283 W: Missing Blank Line separator, <220> field identifier  
L:42 M:283 W: Missing Blank Line separator, <220> field identifier  
L:46 M:283 W: Missing Blank Line separator, <400> field identifier  
L:47 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:54 M:283 W: Missing Blank Line separator, <220> field identifier  
L:66 M:283 W: Missing Blank Line separator, <220> field identifier  
L:68 M:283 W: Missing Blank Line separator, <400> field identifier  
L:76 M:283 W: Missing Blank Line separator, <220> field identifier  
L:78 M:283 W: Missing Blank Line separator, <400> field identifier  
L:86 M:283 W: Missing Blank Line separator, <220> field identifier  
L:88 M:283 W: Missing Blank Line separator, <400> field identifier  
L:96 M:283 W: Missing Blank Line separator, <220> field identifier  
L:98 M:283 W: Missing Blank Line separator, <400> field identifier  
L:106 M:283 W: Missing Blank Line separator, <220> field identifier  
L:108 M:283 W: Missing Blank Line separator, <400> field identifier  
L:116 M:283 W: Missing Blank Line separator, <220> field identifier  
L:118 M:283 W: Missing Blank Line separator, <400> field identifier  
L:126 M:283 W: Missing Blank Line separator, <220> field identifier  
L:128 M:283 W: Missing Blank Line separator, <400> field identifier  
L:136 M:283 W: Missing Blank Line separator, <220> field identifier  
L:138 M:283 W: Missing Blank Line separator, <400> field identifier  
L:147 M:283 W: Missing Blank Line separator, <220> field identifier  
L:149 M:283 W: Missing Blank Line separator, <400> field identifier  
L:161 M:283 W: Missing Blank Line separator, <220> field identifier  
L:163 M:283 W: Missing Blank Line separator, <400> field identifier  
L:176 M:283 W: Missing Blank Line separator, <220> field identifier  
L:178 M:283 W: Missing Blank Line separator, <400> field identifier  
L:186 M:283 W: Missing Blank Line separator, <220> field identifier  
L:188 M:283 W: Missing Blank Line separator, <400> field identifier  
L:196 M:283 W: Missing Blank Line separator, <220> field identifier  
L:198 M:283 W: Missing Blank Line separator, <400> field identifier  
L:205 M:283 W: Missing Blank Line separator, <220> field identifier  
L:207 M:283 W: Missing Blank Line separator, <400> field identifier  
L:214 M:283 W: Missing Blank Line separator, <220> field identifier  
L:216 M:283 W: Missing Blank Line separator, <400> field identifier  
L:226 M:283 W: Missing Blank Line separator, <220> field identifier  
L:236 M:283 W: Missing Blank Line separator, <220> field identifier  
L:238 M:283 W: Missing Blank Line separator, <400> field identifier  
L:245 M:283 W: Missing Blank Line separator, <220> field identifier  
L:247 M:283 W: Missing Blank Line separator, <400> field identifier  
L:257 M:283 W: Missing Blank Line separator, <220> field identifier  
L:259 M:283 W: Missing Blank Line separator, <400> field identifier  
L:267 M:283 W: Missing Blank Line separator, <220> field identifier  
L:269 M:283 W: Missing Blank Line separator, <400> field identifier  
L:277 M:283 W: Missing Blank Line separator, <220> field identifier  
L:279 M:283 W: Missing Blank Line separator, <400> field identifier

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TIME: 11:18:46

Input Set : A:\07039-298001.txt

Output Set: N:\CRF4\06102003\I667947A.raw

L:289 M:283 W: Missing Blank Line separator, <400> field identifier  
L:296 M:283 W: Missing Blank Line separator, <220> field identifier  
L:298 M:283 W: Missing Blank Line separator, <400> field identifier  
L:389 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:35  
L:392 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:35  
L:393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0  
L:409 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:412 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:415 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:418 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:421 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:424 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:427 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:430 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:433 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:436 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:439 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:442 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:445 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:446 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0